

## REMARKS

Claims 1-10 are pending in the application and stand rejected. Claim 1 has been amended. Reconsideration and allowance of Claims 1-10 in view of the above amendments and following remarks are respectfully requested.

### The Rejection of Claims 1-10 Under 35 U.S.C. § 103(a)

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamaguchi et al. (European Patent No. 1202365) in view of Fujita et al. (U.S. Patent No. 6716553). Withdrawal of this ground for rejection is respectfully requested for the following reasons.

Claim 1 recites an electrolyte membrane comprising a porous substrate. The pores of the porous substrate are filled with a first polymer having proton conductivity to impart proton conductivity to the electrolyte membrane. The porous substrate is comprised of a second polymer that is a polyolefin and a third polymer having a carbon-carbon double bond in the molecule of the third polymer. The porous substrate comprises a crosslinked second polymer wherein the second polymers are crosslinked with one another. Claims 2-10 depend from Claim 1.

Claim 1 has been amended to include the recitation that the electrolyte membrane has a proton conductivity of 0.05 S/cm or more and a membrane area change ratio of 20% or less. Support for this amendment can be found in FIGURE 1, particularly the data series labeled B-3. The data from series B-3 was acquired by testing the membrane formed as described in Example 3 of the application as filed.

The Examiner characterizes Yamaguchi et al. as teaching an electrolyte membrane comprising a porous substrate, wherein the pores of the substrate are filled with a first polymer having proton conductivity. The Examiner further states that the porous substrate is comprised

LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100

of a second polymer which is at least one selected from the group of polyolefins, and a third polymer having a double bond in the molecule of the third polymer. The Examiner notes that Yamaguchi et al. does not disclose that the porous substrate comprises a crosslinked second polymer, wherein the second polymers are crosslinked with one another. The Examiner additionally notes that Yamaguchi et al. does not teach a third polymer having a carbon-carbon double bond in the molecule of the third polymer.

The Examiner relies on Fujita et al. as teaching a porous substrate comprising a crosslinked second polymer, wherein the second polymers are crosslinked with one another. The Examiner also relies on Fujita et al. as teaching a third polymer having a carbon-carbon double bond in the molecules of the third polymer. The Examiner believes it would have been obvious to one having ordinary skill in the art at the time of the application to provide the porous substrates of Yamaguchi et al. with the polymers of Fujita et al. to arrive at the claimed invention. Applicants respectfully disagree.

The combined teachings of Yamaguchi et al. and Fujita et al. do not teach, suggest, or otherwise make obvious the claimed invention. Particularly, the invention as recited in independent Claim 1 includes the recitation that the electrolyte membrane has a proton conductivity of 0.05 S/cm or more and a membrane area change ratio of 20% or less. Neither Yamaguchi et al. nor Fujita et al. teach, suggest, or otherwise make obvious the recited characteristics of the electrolyte membrane of the claimed invention. Because the cited references do not teach, suggest, or make obvious the claimed invention, withdrawal of this ground for rejection is respectfully requested.

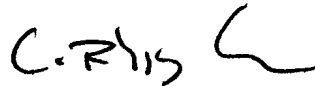
LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100

CONCLUSION

In view of the foregoing remarks, applicants believe that Claims 1-10 are in condition for allowance. If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicants' attorney at the number listed below.

Respectfully submitted,

CHRISTENSEN O'CONNOR  
JOHNSON KINDNESS<sup>PLLC</sup>

A handwritten signature in black ink, appearing to read "L. Rhys Lawson", followed by a stylized flourish.

L. Rhys Lawson, Ph.D.  
Registration No. 57,869  
Direct Dial No. 206.695.1698

LRL:pag/pww

LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100